**I CLAIM:**

1. Physical shock hardened heat sink inclusive semiconductor device mounting apparatus comprising the combination of:

a printed circuit board composed of electrical insulating material and supporting on at least a first surface thereof an array of metallic film electrical conductors;

a T cross-sectioned heat sink metallic body member having a T stem body element of substantial width and length and extended depth dimensions received in transverse of an aperture opening of said printed circuit board;

said T cross-sectioned heat sink metallic body member including T arm portions extending along and beyond said T stem body element substantial width dimension along a first surface of said printed circuit board;

said T cross-sectioned heat sink metallic body member including first and second of said T arm portions disposed at opposed depth dimension ends of said T stem body element extended depth dimension and a heat sink metallic body member saddle region semiconductor device reception area located intermediate said first and second T arm portions on a depth dimension portion of said heat sink metallic body member; and

said T cross-sectioned heat sink metallic body member including a T stem body element slot member and a T stem body element slot member-engaged keeper member disposed along a second surface of said printed circuit board to hold said printed circuit board in captured engagement between said T arm portions and said slot member-engaged keeper member.

2. The physical shock hardened heat sink inclusive semiconductor device mounting apparatus of claim 1 wherein said metallic film electrical conductors and said T cross-sectioned heat sink metallic body member are comprised of metallic copper.

3. The physical shock hardened heat sink inclusive semiconductor device mounting apparatus of claim 2 wherein said T cross-sectioned heat sink metallic body member T arm portions are connected by tin/lead solder with selected of said printed circuit board surface array of metallic film electrical conductors.

4. The physical shock hardened heat sink inclusive semiconductor device mounting apparatus of claim 1 wherein said first and second of said T arm portions are of rectangular cross section.

5. The physical shock hardened heat sink inclusive semiconductor device mounting apparatus of claim 1 further including a semiconductor device received in intimate thermal contact with said heat sink metallic body member saddle region.

6. The physical shock hardened heat sink inclusive semiconductor device mounting apparatus of claim 5 wherein said semiconductor device intimate thermal contact includes a solder interface connection with a saddle region portion of said heat sink.

7. The physical shock hardened heat sink inclusive semiconductor device mounting apparatus of claim 5 wherein said semiconductor device intimate thermal contact includes a thermally conductive silicone material interface connection with said saddle region portion of said heat sink.

8. The physical shock hardened heat sink inclusive semiconductor device mounting apparatus of claim 2 wherein said printed circuit board includes a second array of metallic film electrical conductors on a second surface thereof and wherein said T stem body element slot member-engaged keeper member includes a tin/lead solder interface connection with said second array of metallic film electrical conductors on said second printed circuit board surface.

9. The physical shock hardened heat sink inclusive semiconductor device mounting apparatus of claim 1 further including a second T stem body element slot member and a second T stem body element slot member-engaged keeper member disposed along said second surface of said printed circuit board and additionally holding said printed circuit board in captured engagement between said T arm portions and said slot member-engaged keeper members.

10. The physical shock hardened heat sink inclusive semiconductor device mounting apparatus of claim 1 wherein said heat sink metallic body member saddle region semiconductor device reception area is disposed in a coplanar flush relationship with said printed circuit board first surface.

11. The high G-force physical impact tolerant, high thermal conductivity and low electrical inductance method of mounting and heat sinking a semiconductor device comprising the steps of:

disposing said semiconductor device in a flowed thermal conductive media-maintained physical, thermal, and electrical contact with a heat sink element of conductive metal thermal conductivity characteristics;

said disposing step also locating said semiconductor device in at least unidirectional physical restraint intermediate integral structural portions of said metallic heat sink element;

suspending said metallic heat sink element and said semiconductor device in captive confinement within an aperture of an electrically insulating printed circuit board;

retaining said metallic heat sink element within said aperture of said electrically insulating printed circuit board using metallic heat sink-connected metallic wing elements spreading across opposed lateral surface portions of said printed circuit board adjacent said aperture; and

bonding selected portions of said metallic heat sink-connected metallic wing elements with adjacent electrically and thermally conductive electrically grounded film wiring conductor located on a surface of said printed circuit board.

12. The high G-force physical impact tolerant, high thermal conductivity and low electrical inductance method of mounting and heat sinking a semiconductor device of claim 11 wherein said disposing step and said bonding step each include a soldering with tin/lead solder step.

13. Impact resistant semiconductor device mounting and cooling apparatus comprising the combination of:

a printed circuit board having electrical conductors arrayed on first and second surfaces thereof and having a shaped transverse opening located in a selected portion thereof;

an integral metallic heat sink member of first cross section shape conforming with said printed circuit board shaped transverse opening and disposed within in said transverse opening;

said integral metallic heat sink member having a second cross sectional shape orthogonal of said first cross sectional shape and inclusive of a wing element portion extending along said printed circuit board first surface; and

said integral metallic heat sink member having a third cross sectional shape orthogonal of both said first cross sectional shape and said second cross sectional shape and including a recessed saddle portion parallel with said printed circuit board along a first cross sectional extremity and a grooved recess parallel with and adjacent said printed circuit board second surface along a second cross sectional extremity.

14. The impact resistant semiconductor device mounting and cooling apparatus of claim 13 wherein said first cross sectional shape also includes said second cross sectional shape wing members.

15. The impact resistant semiconductor device mounting and cooling apparatus of claim 13 wherein said integral metallic heat sink member third cross sectional shape recessed saddle portion and said printed circuit board first surface electrical conductors are disposed in substantially coplanar elevation.

16. The impact resistant semiconductor device mounting and cooling apparatus of claim 13 further including a second grooved recess parallel with and adjacent said printed circuit board second surface and received in a third extremity of said third cross sectional shape.

17. The impact resistant semiconductor device mounting and cooling apparatus of claim 16 further including a first and second metallic keeper members engaged with said first and second grooved recesses and capturing said printed circuit board intermediate said first cross sectional shape wing element portion and said first and second metallic keeper members.

18. The impact resistant semiconductor device mounting and cooling apparatus of claim 17 wherein said first and second metallic keeper members and said first cross sectional shape wing element portion are engaged with said printed circuit board first and second surface electrical conductors by tin/lead solder.

19. The impact resistant semiconductor device mounting and cooling apparatus of claim 13 wherein said integral metallic heat sink member also comprises an electrical current conducting portion of said printed circuit board first and second surface electrical conductors.

20. The impact resistant semiconductor device mounting and cooling apparatus of claim 13 wherein said metallic heat sink member third cross sectional shape recessed saddle portion is disposed in a coplanar relationship with a topside surface of said printed circuit board and wherein a metal window portion of a heat sink-mounted semiconductor device is soldered to said saddle portion with circuit leads of said semiconductor device overhanging said saddle portion and engaging topside circuit conductors of said printed circuit board.